C6.3: Single-Case Experimental Design in Evaluating Drug Effects on Behavior in Children

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Abstract Categories:
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Abstract:
Introduction: PURPOSE: The purpose of this presentation is to present the use of single-case experimental designs (SCEDs) suitable for evaluating drug effects on behavior including specific advantages and disadvantages of the designs. SIGNIFICANCE: SCEDs are well suited for evaluating the effects of pharmacologic agents on behavior and offer a useful alternative to traditional between-group designs. The strength of SCEDs is their usefulness with small numbers of patients generating reliable, systematically generated data supporting evidence-based practice. Replication of single-case experimental studies of individuals leads to inferences regarding the generalizability of findings to other similar individuals. The use of this methodology in medical research is relatively new and warrants further investigation.

Method(s): Hypothesis: The use of ABA1 design is well suited to research involving drug evaluations. Research protocol involving current, ongoing nursing research utilizing the experimental ABA1 design evaluating the effectiveness of aripiprazole in treating significant disruptive behaviors in children with autism will be reviewed. Design: Single subject design: no drug (A)-drug (B) -placebo (A1) with parents and teachers blind to the drug/placebo arms of the study. Subject and Setting: 4 subjects meeting inclusion/exclusion criteria will be recruited/enrolled from Nemours Children’s Clinic, Jacksonville, Florida. Interventions and Procedures: Behaviors of interest will be operationalized for the purpose of evaluating behavioral frequencies. Behavior will be documented using video recording within the home for the purpose of documenting behaviors in a naturalistic setting. The Aberrant Behavioral Checklist and the Clinical Global Impressions Scale will also be utilized to document behavior.
Results: Interventions and Procedures: Evaluation of data utilizing visual inspection and its underlying rationale will be reviewed. The insensitivity of visual inspection for detecting weak effects is considered an advantage in SCEDs since this technique encourages only clear and potent interventions to be interpreted as producing reliable behavioral effects. Statistical analysis of data using RANOVA will also be reviewed.

Discussion & Conclusions: SCEDs offer an innovative approach to pharmacotherapy research and provide detailed information regarding the process necessary to produce significant behavioral change. This information is typically not identified in large between-group designs.

Abstract History:
This abstract has not been presented or accepted for presentation in whole or in part at the SNRS or other scientific meeting.

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